



National Spent Nuclear Fuel Program Direction

*Providing for safe,
efficient disposition of
DOE spent nuclear fuel*

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April 22 & 23, 2003



National Spent Nuclear Fuel Program

NSNFP Accomplishments

- **Presented the current approach to licensing of DOE SNF with RW to the NRC**
- **Issued the DOE SNF Source Term Report**
- **Completed analyses of a ‘dropped canister with self-moderating fuel’**
- **Completed external criticality probability analysis model report for DOE SNF**



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NSNFP Accomplishments

- **Developed and issued the final draft of the SNF Corporate Project Team SubProject Report – “Evaluation of Reliance on the Standardized Canister”**
- **Revised the Integrated Acceptance Schedule for the SNF Corporate Project Team**
- **Accepted the INEEL QA Program**



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SNF Database

- *Decision made to no longer issue the updated SFD CD*
- *NSNFP will continue to update the database*
- *All requests for information from the SFD to be made in writing to Manager, NSNFP*
- *Change due to security concerns*



NSNFP Future

- *Only one thing is for certain:
– It's uncertain*



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Evaluation of Reliance on the Standardized Canister

- *Compared current baseline of placing the majority of DOE SNF into sealed canisters for interim storage, transportation and disposal to a bare-fuel alternative*



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Evaluation of Reliance on the Standardized Canister

- *Evaluated the two alternatives in the areas of:*
 - *Regulatory acceptance*
 - *Technical Viability*
 - *Cost and schedule*
 - *Health and safety*
 - *Programmatic and technical risk*
 - *Uncertainty*



Evaluation of Reliance on the Standardized Canister

- Conclusion and
Recommendation:

Maintain the Current Baseline



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Rationale for Conclusion and Recommendation

- *Current baseline is about \$1B less costly*
 - *Additional costs in bare fuel for prolonged use of storage facilities. Esp. old wet storage*
 - *Additional repository handling costs for bare fuel*
 - *Increased transportation costs for bare fuel*



Rationale for Conclusion and Recommendation

- *Risk of Additional Characterization is Greater for Bare Fuel*
 - *Costs are highly uncertain and were not included in the cost results*
 - *Non-destructive assay not possible for much of the DOE SNF*



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Rationale for Conclusion and Recommendation

- *Bare fuel requires additional NEPA, Licensing and Facility Design Changes which Delay the Disposal Schedule*
- *Current Baseline has Lower Health and Safety Impacts*



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Evaluation of Reliance on the Standardized Canister

- *Recognized that it may be more cost effective to handle some SNF bare*
- *Recommend follow up evaluations to identify this SNF*
- *Consider prioritizing shipments so that one or more sites can be shut down*
- *Need further analysis to optimize the selected option*

